

## Claim

1. A polypeptide which comprises the amino acid sequence represented by SEQ ID NO:2 or SEQ ID NO:4, or an amino acid sequence in which from 1 to 10 amino acids are deleted, substituted and/or inserted in the amino acid sequence represented by SEQ ID NO:2 or SEQ ID NO:4, and which binds to Akt2.

2. A polypeptide consisting of the amino acid sequence represented by SEQ ID NO:2 or SEQ ID NO:4.

3. A polynucleotide coding for the polypeptide described in claim 1 or claim 2.

4. An expression vector comprising the polynucleotide described in claim 3.

5. A cell transformed with the expression vector described in claim 4.

6. A method for screening a substance which inhibits binding of a polypeptide described in claim 1 or claim 2 or a polypeptide consisting of an amino acid sequence having a homology of 90% or more with the amino acid sequence represented by SEQ ID NO:2 or SEQ ID NO:4 and which binds to Akt2, with Akt2, which comprises

allowing (1) the aforementioned polypeptide or a cell expressing the aforementioned polypeptide, to contact (2) a substance to be tested,

measuring binding of said polypeptide with Akt2, and

selecting a substance which inhibits the  
aforementioned binding.

7. The screening method described in claim 6,  
wherein the binding inhibiting substance is an insulin  
5 resistance improving agent and/or a carbohydrate metabolism  
improving agent.

8. The screening method described in claim 6 or  
claim 7, wherein the step of measuring binding of (1) the  
polypeptide described in claim 1 or claim 2 or a  
10 polypeptide consisting of an amino acid sequence having a  
homology of 90% or more with the amino acid sequence  
represented by SEQ ID NO:2 or SEQ ID NO:4, and which binds  
to Akt2, to (2) Akt2 is a step of measuring a change in  
Akt2 based on the change in the aforementioned binding.

15 9. A method for producing a pharmaceutical  
composition for insulin resistance improvement and/or  
carbohydrate metabolism improvement, which comprises  
carrying out screening using the screening method  
described in claim 6 to claim 8, and  
20 preparing a pharmaceutical preparation.